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AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1-6. (Cancelled)

7. (Currently Amended) An apparatus as claimed in ~~claim 6~~ claim 9 wherein the processor is incorporated into a controller of an engine.

8. (Currently Amended) An apparatus as claimed in ~~claim 6~~ claim 9 wherein the processor is incorporated into a controller of an aircraft.

9. (Currently Amended) An apparatus ~~as claimed in claim 6~~ wherein the magnetic fluid clutch comprises for measuring torque comprising:

a magnetic fluid clutch including a rotating shaft having a first end and a second end, one of the ends forming the torque a torque output end of the magnetic fluid clutch, the magnetic fluid clutch including a magnetic fluid medium therein and a coil for generating a magnetic field and applying the magnetic field to the magnetic fluid medium, the magnetic fluid clutch further including a casing surrounding and rotatable relative to the rotating shaft and containing the magnetic fluid medium therein, the rotating casing forming a torque input end of the magnetic fluid clutch, the

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torque input end being adapted to be connected to a torque supply source and the torque output end being adapted to be connected to a rotational work device, and

~~a casing surrounding and rotatable relative to the rotating shaft and containing the magnetic fluid medium therein, the rotating casing forming the torque input end of the magnetic fluid clutch.~~

a first detector positioned at the torque input end;

a second detector positioned at the torque output end;  
and

a processor for controlling current through the coil of the magnetic fluid clutch and processing signals from the first and second detectors to calculate an angular deviation between the torque input end and the torque output end, the angular deviation being a function of an adjustable property of the magnetic fluid medium in a steady-state quasi-solid phase thereof.

10. (Original) An apparatus as claimed in claim 9 wherein the magnetic fluid clutch comprises a first rotating member affixed to the rotating shaft and a second rotating member affixed to an inside surface of the casing in order to increase frictional contact of the respective rotating shaft and the casing with the magnetic fluid medium.
11. (Cancelled)
12. (Previously cancelled)

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13. (Previously presented and Currently Amended) An apparatus is claimed in ~~claim 6~~ claim 9 wherein the processor is adapted to vary electric current through the coil of the magnetic fluid clutch, thereby determining a level of adequate measuring range in which the calculated angular deviation is optimized.